



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/542,163

07/12/2005

Akira Kida

59395US006

8457

32692 7590 05/16/2008
3M INNOVATIVE PROPERTIES COMPANY
PO BOX 33427
ST. PAUL, MN 55133-3427

EXAMINER

TYNAN, MATTHEW

ART UNIT

PAPER NUMBER

2871

NOTIFICATION DATE

DELIVERY MODE

05/16/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

LegalUSDocketing@mmm.com
LegalDocketing@mmm.com

Office Action Summary	Application No. 10/542,163	Applicant(s) KIDA, AKIRA	
	Examiner MATTHEW TYNAN	Art Unit 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 2/7/2008 have been fully considered but they are not persuasive.
2. Specifically, regarding the rejection of claims 1-4 and 6-10 under 35 U.S.C. 103(a) as being unpatentable over Lee (KR 10-2001-0053799) and Kobayashi et al. (U.S. 2002/0122249), Applicant argues that the silence of the references as to the size of the gap between optical sheets renders the claims non-obvious.
3. The examiner respectfully disagrees. Though Lee is silent regarding the width of the gap between the optical sheets, the gap size is limited by practical considerations. On one hand, the gap cannot be too large or else the display device will be overly thick, negating the thinness which is one of the most attractive features of LCDs. On the other hand, the gap cannot be too small or else there would be no space for the supporting (11) or reinforcing pieces (13) as taught by Kobayashi. Moreover, although Applicant's disclosure states that the gap is "generally within the range of 0.3 to 2.0 mm," the disclosure also specifies that "optical films may be stacked with or without gaps" and "the gap...can be changed in a broad range" (disclosure, pg. 11, lines 6-11). Thus, Applicant has not demonstrated any criticality of the claimed gap thickness. Therefore, the rejections are maintained.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4 and 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (KR 10-2001-0053799) in view of Kobayashi et al. (U.S. 2002/0122249).

6. Regarding claim 1, Lee discloses at least two optical films (11, Drawing 4); a plurality of optical film fixing parts (21, Drawing 4); a film tension controlling member attached at one of the ends thereof to each of the film fixing parts in such a fashion as to be capable of pulling each of said optical films under tension; a film fixing frame (8) for fixing said optical films; the films, film tension controlling member, and the film fixing frame are integrated with one another; and the at least two optical films are stacked with a gap between them (see Drawing 3).

7. Lee does not disclose that there are at least 4 optical film fixing parts with film tension controlling members comprising a wire and capable of pulling each of the optical films under tension independently while maintaining the flatness of the films. However, Kobayashi et al. teaches (e.g. Figs. 5-11) four or more optical film tension control members comprising a wire connected to independently tense the optical films ([0064]). These tension members allow the optical films to be held without distortion or bending ([0065]). It would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the optical film tension control members taught by Kobayashi et al. for those disclosed by Lee, since the substitution of such tension control members would have yielded the predictable result of keeping the optical films under tension.

8. Lee is silent regarding the size of the gap between the optical films. However, the gap thickness is recognized as a result effective variable from practical considerations. Specifically, a large gap will make the display overly thick while a gap that is too narrow will prevent the

Art Unit: 2871

attachment of tension-controlling members as suggested by Kobayashi et al. Applicant does not suggest that the claimed range is critical, but merely discloses the range as a workable gap thickness. Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

9. Therefore, claim 1 is unpatentable.

10. Regarding claim 2, Lee discloses a prism sheet (5) and a diffusion sheet (6) for use in improving the light distribution from the backlight.

11. Therefore, claim 2 is unpatentable.

12. Regarding claim 3, Kobayashi et al. discloses the film tension controlling member is formed of an elastic material.

13. Therefore, claim 3 is unpatentable.

14. Regarding claim 4, Kobayashi et al. discloses the elastic material is a spring.

15. Therefore, claim 4 is unpatentable.

16. Regarding claim 6, Lee discloses the optical film structure for use between an LCD unit and an illumination unit.

17. Therefore, claim 6 is unpatentable.

18. Regarding claim 7, Lee discloses an illumination unit including at least one light source and a light transmission surface for guiding the rays from the light source and the optical film structure of claim 1. Therefore, claim 7 is unpatentable.

19. Regarding claim 8, Lee discloses the apparatus of claim 7 for use as a backlight unit for an LCD device.

Art Unit: 2871

20. Therefore, claim 8 is unpatentable.

21. Regarding claim 9, Lee discloses an illumination unit at least including one light source and a light transmission surface; an optical film structure as defined in claim 1 arranged on the light transmission surface; and an LCD unit arranged on the optical film structure.

22. Therefore, claim 9 is unpatentable.

23. Regarding claim 10, Lee discloses the illumination unit is a backlight unit.

24. Therefore, claim 10 is unpatentable.

25. Claims 1-4 and 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (KR 10-2001-0053800) in view of Kobayashi et al. (U.S. 2002/0122249).

26. Regarding claim 1, Lee discloses at least two optical films (11, Drawing 4); a plurality of optical film fixing parts (35, Drawing 4); a film tension controlling member (32) attached at one of the ends thereof to each of the film fixing parts in such a fashion as to be capable of pulling each of said optical films under tension; a film fixing frame (8) for fixing said optical films; the films, film tension controlling member, and the film fixing frame are integrated with one another; and the at least two optical films are stacked with a gap between them (see Drawing 3).

27. Lee does not disclose that there are at least 4 optical film fixing parts with film tension controlling members comprising a wire and capable of pulling each of the optical films under tension independently while maintaining the flatness of the films. However, Kobayashi et al. teaches (e.g. Figs. 5-11) four or more optical film tension control members comprising a wire connected to independently tense the optical films ([0064]). These tension members allow the optical films to be held without distortion or bending ([0065]). It would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the optical film tension

Art Unit: 2871

control members taught by Kobayashi et al. for those disclosed by Lee, since the substitution of such tension control members would have yielded the predictable result of keeping the optical films under tension.

28. Lee is silent regarding the size of the gap between the optical films. However, the gap thickness is recognized as a result effective variable from practical considerations. Specifically, a large gap will make the display overly thick while a gap that is too narrow will prevent the attachment of tension-controlling members as suggested by Kobayashi et al. Applicant does not suggest that the claimed range is critical, but merely discloses the range as a workable gap thickness. Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

29. Therefore, claim 1 is unpatentable.

30. Regarding claim 2, Lee discloses a prism sheet (5) and a diffusion sheet (6) for use in improving the light distribution from the backlight.

31. Therefore, claim 2 is unpatentable.

32. Regarding claim 3, Kobayashi et al. discloses the film tension controlling member is formed of an elastic material.

33. Therefore, claim 3 is unpatentable.

34. Regarding claim 4, Kobayashi et al. discloses the elastic material is a spring.

35. Therefore, claim 4 is unpatentable.

36. Regarding claim 6, Lee discloses the optical film structure for use between an LCD unit and an illumination unit.

37. Therefore, claim 6 is unpatentable.

38. Regarding claim 7, Lee discloses an illumination unit including at least one light source and a light transmission surface for guiding the rays from the light source and the optical film structure of claim 1. Therefore, claim 7 is unpatentable.

39. Regarding claim 8, Lee discloses the apparatus of claim 7 for use as a backlight unit for an LCD device.

40. Therefore, claim 8 is unpatentable.

41. Regarding claim 9, Lee discloses an illumination unit at least including one light source and a light transmission surface; an optical film structure as defined in claim 1 arranged on the light transmission surface; and an LCD unit arranged on the optical film structure.

42. Therefore, claim 9 is unpatentable.

43. Regarding claim 10, Lee discloses the illumination unit is a backlight unit.

44. Therefore, claim 10 is unpatentable.

Conclusion

45. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Art Unit: 2871

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MATTHEW TYNAN whose telephone number is (571)270-1433. The examiner can normally be reached on Mon-Fri. 7:30-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-4491. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. T./

Examiner, Art Unit 2871

/Andrew Schechter/

Primary Examiner, Art Unit 2871